

# AuthenticFood

*- Fast methods for authentication of organic plant based foods*

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# Partners in CoreOrganic II

## ”AuthenticFood”

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15	Partner	BIOS	BIOS	Italy	President Vittorio Crivello
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# Credibility in the Organic Market

- "Certification Does Not Protect Consumers"



Thursday 05 May 2011

## The Telegraph

HOME NEWS SPORT FINANCE COMMENT BLOG  
Motoring Health Property Gardening Food and Drink  
Wine Shop Wine Pub

Food and Drink News

### One sixth of 'fresh' food is fake

One in six farm shops offer "organic," "fresh" customers, an investigation has found



Company director jailed for selling fake organic food  
One Food Limited repackaged non-organic ingredients in £500,000 scam

88% of Organic Food is Fake

By Nathan Schwartzman Dec 03, 2007 9:59AM UTC

16 Comments and 0 Reactions

Tweet 0 Like

Original Article.

“Organic tofu,” “organic jam,” “organic olive oil.”

A study has found that the majority of 'organic' farm products sold in Korea are fake. The Korea Food Research Institute announced on the 29th that "88% of domestic organic farm products have been marked as organic by their manufacturers, not the government." Unlike in foreign countries, organic products in Korea do not need government certification, creating these abuses. Organic products are 2.82 times as expensive as their non-organic counterparts. Consumers are buying expensive "organic" products without knowing what they truly are.

'Food fraud' is a growing problem in Britain as consumers become increasingly willing to pay more for produce seen to be fresher, healthier or less harmful to the environment Photo: ALAMY



# Objectives

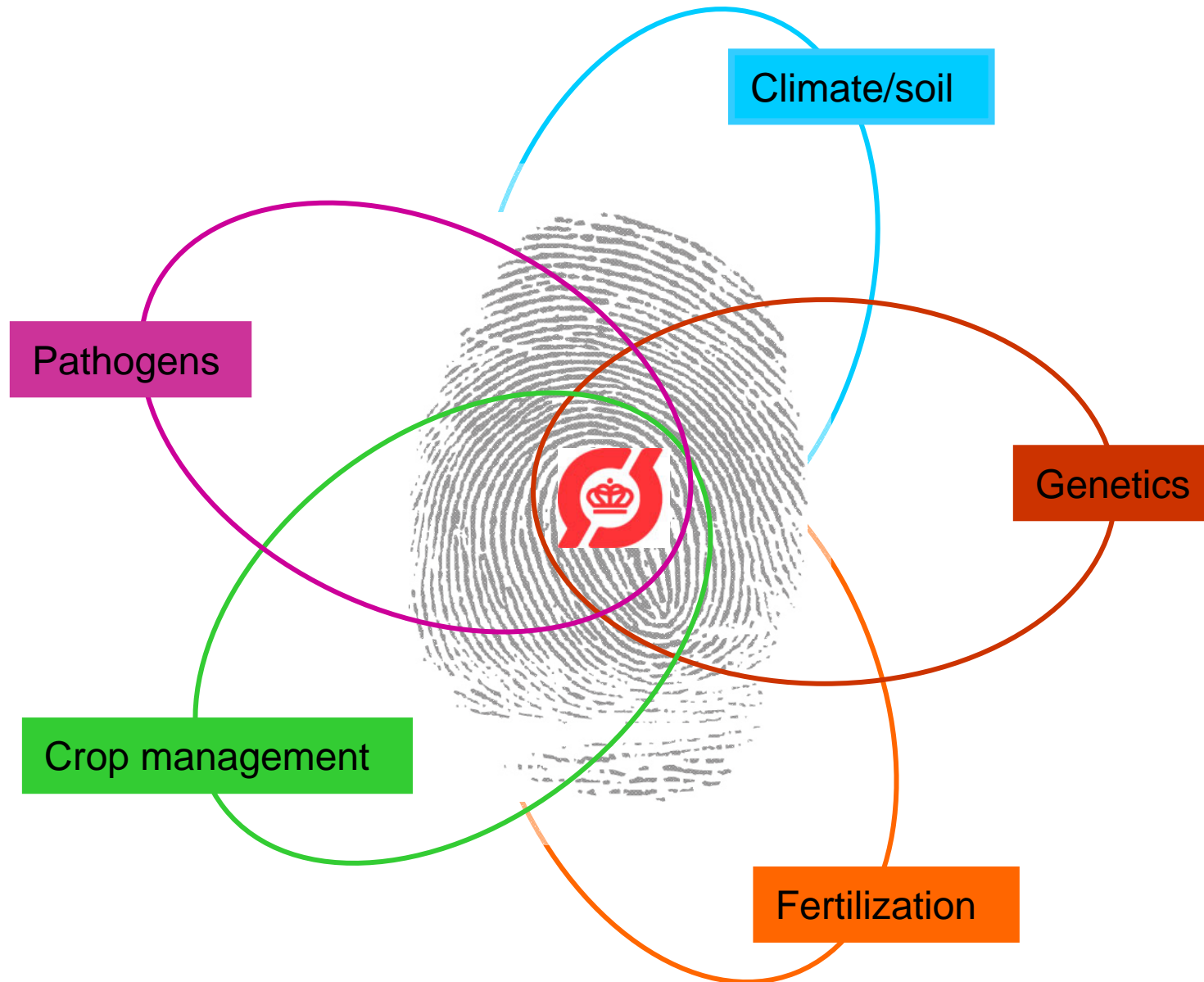
In order to document the authenticity of organic food products, a wide range of different analytical methods and protocols will be applied on samples, obtained both at the field and farm level and as processed plant based food products. The analytical methods have been selected according to the following basic criteria:

- i) previously documented in the scientific literature as promising tools for discrimination between organic and conventional samples
- ii) can potentially be developed into a fast screening procedure, and
- iii) the analytical costs per sample are low to moderate.

The results of the measurements will be evaluated and continuously discussed with a range of experienced control laboratories as well as inspection and certification bodies for their relevance in practical authentication of organic foods.



# The unique chemical fingerprint of organic plant products



# Scientific Idea





# Hypotheses

The following main hypotheses (h) will be tested:

*h1.* Organic plant samples can be authenticated at the field and farm levels under conditions where bias is introduced by differences caused by e.g. farming practise, geographical location, plant cultivar and growth season.

*h2.* Authentication of the organic origin is maintained in processed cereal and vegetable samples when data from suitable analytical methods are applied and combined.

*h3.* The validated methods can be implemented by relevant stakeholders such as inspection and certification bodies.



# Biological Cases





# Analytical Strategies

Ionomics

Stable Isotope Analysis

Metabolomic Fingerprinting:

Pesticides



# Expected results and "added value"

- Provide "proof-of-concept"
  - Identify bottlenecks in implementation
  - If successful: prepare for official CEN/AOAC Validation
- 
- Impossible for a single country
    - Analytical/Scientifically
    - Validation required at EU level
  - Elimination of geographical and environmental chemical imprints



# Thank you !



"Mess yourself up a little —  
the key to this business  
is *authenticity*."



